



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

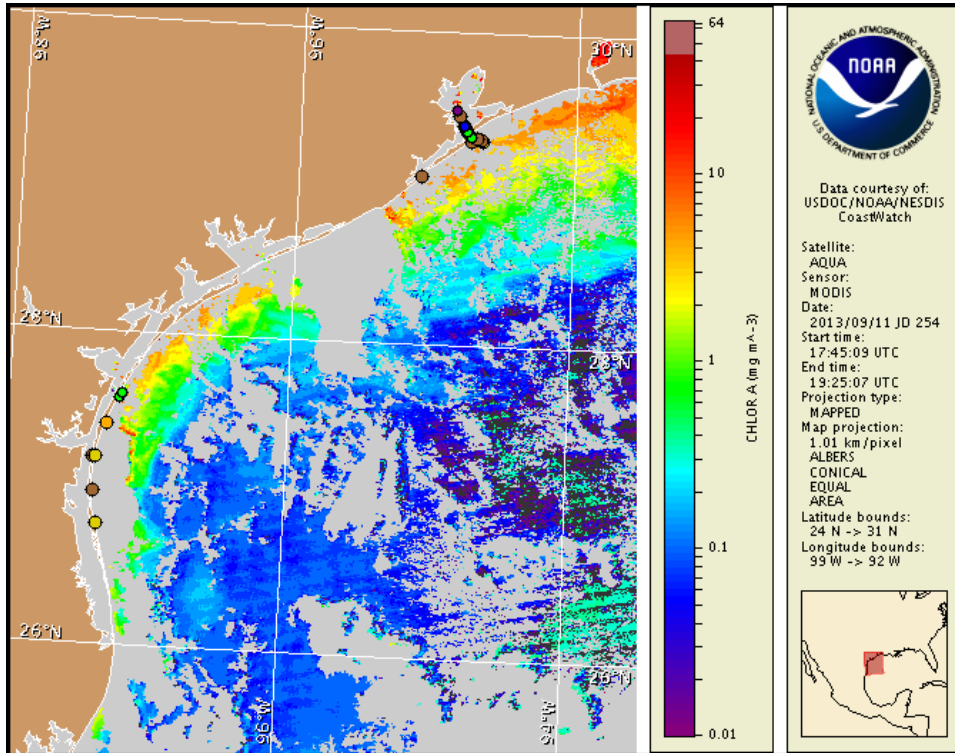
Thursday, 12 September 2013

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, September 9, 2013



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 2 to 10: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/envconcerns/hab/redtide/status.phtml>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

Not present to medium concentrations of *Karenia brevis* (commonly known as Texas red tide) are present along the coast of Texas. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, September 12 to Monday, September 16 is listed below:

Region: Forecast (Duration)

Bolivar Peninsula region: Low (Th-M)

Galveston Island region: Low (Th-M)

Bay region-Galveston Bay: Low (Th-M)

San Luis Pass to Sargent Beach region: Low (Th-M)

Padre Island National Seashore region: Moderate (Th-M)

All Other Texas regions: None expected (Th-M)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Health information, from the Texas Department of State Health Services and other agencies, is available at http://tidesandcurrents.noaa.gov/hab/hab_health_info.html. No reports of respiratory irritation or dead fish have been received over the past few days.

There are currently patches of a bloom of the algae *Aureoumbra lagunensis* in the upper Laguna Madre region. This algae species does not produce the respiratory irritation associated with the Texas red tide caused by *Karenia brevis*, but it may cause discolored water and fish kills.

Analysis

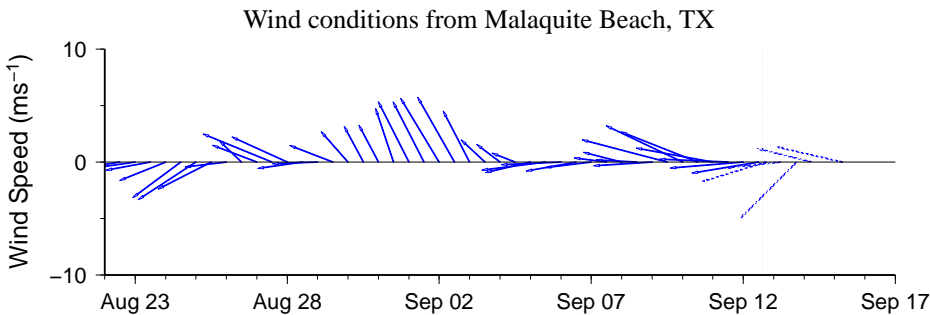
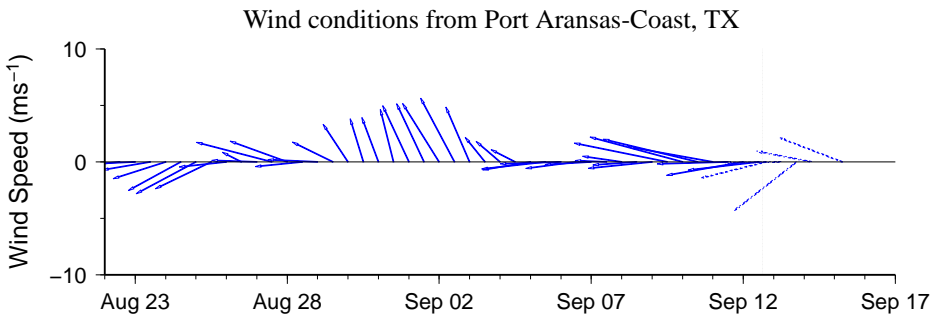
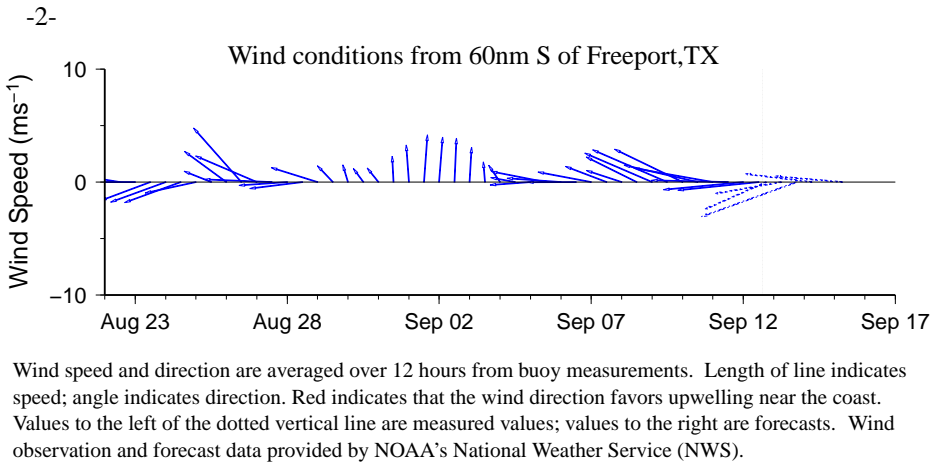
Concentrations of *Karenia brevis* have been identified in the Bolivar Peninsula, Galveston, San Luis Pass to Sargent Beach, and Port Aransas/Mustang Island to Padre Island National Seashore (PINS) regions of Texas. In the Galveston Island, Galveston Bay, and Bolivar Peninsula regions, recent samples indicate *K. brevis* concentrations have decreased and now range between 'not present' and 'low a' (TPWD, 9/5-9). In the Port Aransas/Mustang Island to PINS region, Texas A&M University's Imaging Flow Cytobot is detecting increasing concentrations of *K. brevis* at Port Aransas (TAMU, TPWD; 9/12). Two samples collected from Packery Channel North Jetty (gulf side) and Bob Hall Pier indicate that *K. brevis* concentrations are 'not present' (TPWD, 9/6). No new samples have been received from the PINS region since samples collected last week indicated that *K. brevis* concentrations ranged between 'not present' and 'medium' (TPWD, 8/30-9/4). No impacts have been reported from anywhere along the Texas coast this week (TPWD, 9/9-12).

Over the past few days, MODIS Aqua imagery (9/11, shown left) has been obscured by clouds, limiting analysis. Patches of elevated to high chlorophyll (3 to >10 $\mu\text{g/L}$) are visible along- and offshore the coast from the Sabine Pass to Freeport region, with patches of elevated chlorophyll (3-6 $\mu\text{g/L}$) visible along- and offshore from the Matagorda Peninsula to San Jose Island regions. Elevated chlorophyll is not necessarily indicative of the presence of *K. brevis* and could also be an artifact of clouds in the imagery or due to the resuspension of benthic chlorophyll and sediments along the coast. In situ sampling is

necessary to confirm the presence of *K. brevis*.

Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 40 km south from the Bolivar Roads Pass region, 60 km south from the Sargent Beach region, 60 km south from the PINS 0 mile marker, and 60 km south from the PINS 45 mile marker, with a potential transport of 70 km south from the Port Aransas region, from September 11-15.

Kavanaugh, Yang

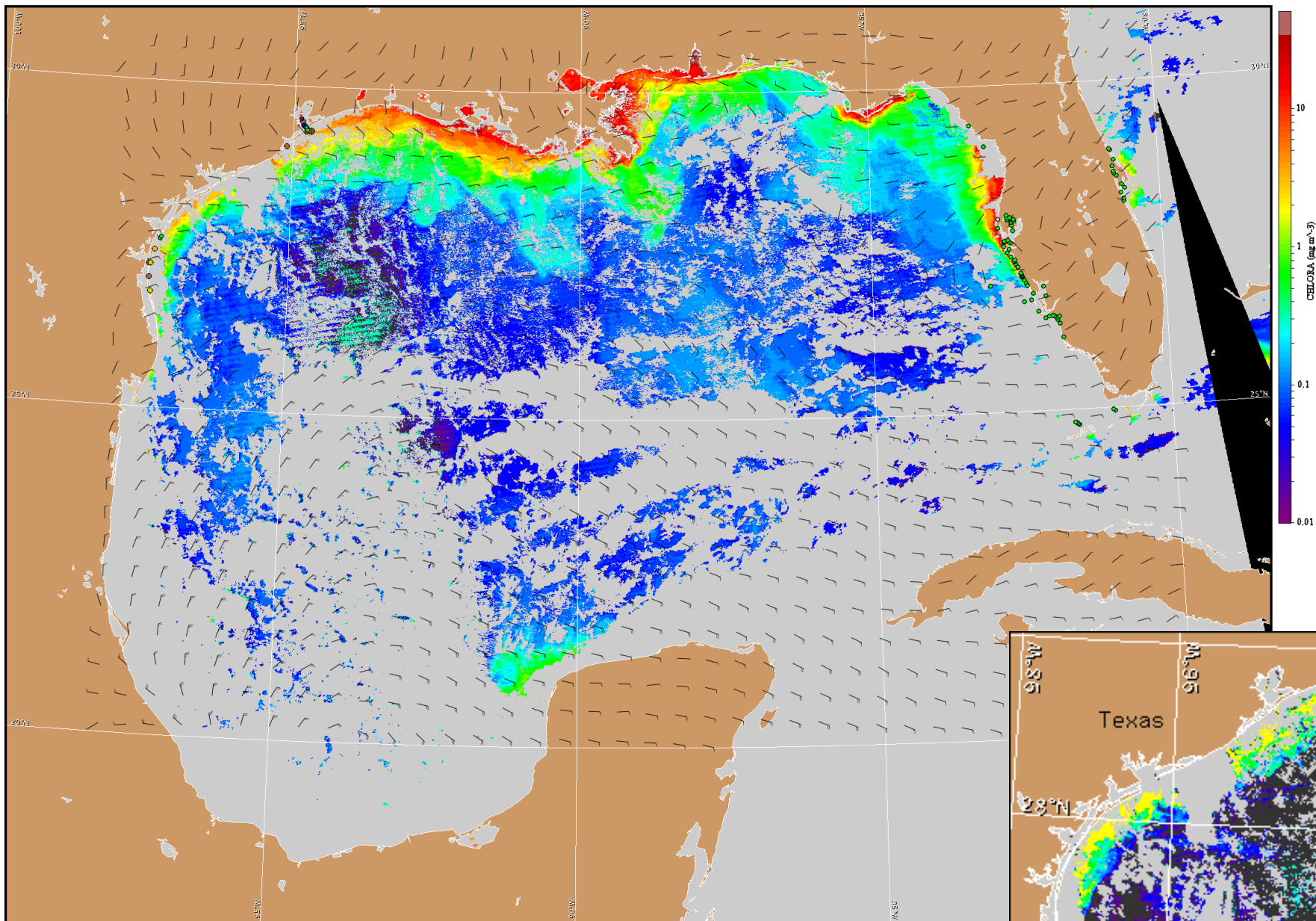


Wind Analysis

Galveston Region: East winds (5-15kn, 3-8m/s) today through Monday.

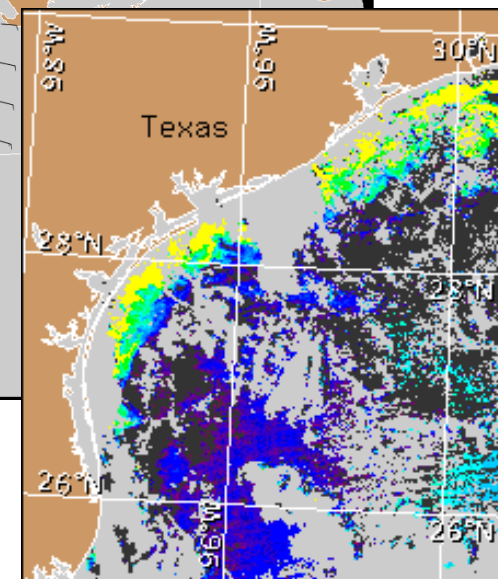
Port Aransas: East winds (10-15kn, 5-8m/s) today. Northeast winds (10-15kn) Friday becoming east winds (10-15kn) Friday night through Monday.

Padre Island National Seashore Region: East winds (15kn, 8m/s) today. Northeast winds (15kn, 8m/s) tonight through Friday night. East winds (15-20kn, 8-10m/s) Saturday through Monday.



Satellite chlorophyll image and forecast winds for September 13, 2013 06Z with points representing cell concentration sampling data from September 2 to 10: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).